

### REMARKS

Claims 1-18 and 33-38 remain in this case.

The indication that the drawings have been objected to on the Office Action Summary is incorrect; claims 19-32 were cancelled in the prior amendment.

#### CLAIM REJECTIONS UNDER 35 USC § 112

Claims 1-38 (actually claims 1-18 and 33-38) are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

Applicant has amended the specification in response to the rejections relating to **claims 1, 33, 37 and 38**. **Support for these amendments** are found in the description and the drawings as filed so that no new matter has been added to the claims. **Claim 13** has been amended to remove reference to "wire mesh" and "a sheet of material".

#### CLAIM REJECTIONS UNDER 35 USC § 102

Claims 1-5, 8, 12, and 33-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Shingleton (US Patent 6,058,930).

#### CLAIM REJECTIONS UNDER 35 USC § 103

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shingleton (US Patent 6,058,930) in view of Olah (US Patent 6,399,874).

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shingleton (US Patent 6,058,930) in view of Berman et al. (US Patent 4,663,085).

Claims 13, 14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shingleton (US Patent 6,058,930) in view of Catella et al. (US Patent 4,611,090).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shingleton (US Patent 6,058,930), Catella et al. (US Patent 4,611,090) as applied to claim 13 above in further view of Berman et al. (US Patent 4,663,085).

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shingleton (US Patent 6,058,930), Catella et al. (US Patent 4,611,090) as applied to claim 13 above and in further view of Yamawaki et al. (US patent 6,489,552 B2).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shingleton (US Patent 6,058,930) as applied to claim 8 above, in view of Blieden et al. (US patent 4,153,813).

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shingleton (US Patent 6,058,930) as applied to claim 33 above, in view of Morton (US Patent 6,341,451 B1).

Claim 37 and 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shingleton (US Patent 6,058,930) and Morton (US Patent 6,341,451 B1) as applied to claim 36 above, in view of Stahl et al. (5,588,829). It appears that instead of the Stahl patent, the reference used is the Klintworth patent (although both are directed to thrust grates).

#### The Cited Art

US patent number 6,058,930 to Shingleton discloses a solar array 80 (see figure 9A) of several rows 30 of solar panels 14. The solar panels 14 are mounted to torque tubes 12 which are journaled to the upper ends of vertical piers 16. A linear actuator 42 is used to rock the rows 30 of solar panels 14 between East-facing and West-facing orientations.

The patent to Catella (U.S. Patent No. 4,611,090) discloses a semi rigid support member 10 for supporting flexible PV modules 22. Flexible PV modules 22 are secured to semi rigid support member 10 using adhesive. (Figure 4, column 8/ lines 12-18) The embodiment of figure 5 discloses an array of 30 of support members 32. Each support member 32 includes a frame 33 having inwardly extending rib stiffeners 36 that terminate near the center at a rectangular structure 37. Posts 43 are used to connect the support members 32 at each end of the array 32 to a base 42 at each end.

The Morton patent (U.S. Patent No. 6,341,451) discloses a portable garage 10 having solar panels 21, 22 on its top wall 12. The solar panels are used to power, for example, cylinder and arm members 29, 30 to open and close garage door 24.

The Klintworth patent (U.S. Patent No. 6,345,580) is directed to a thrust gate with a row of movable grate plates 5 which can be opened or closed to adjust the amount of air flowing through the thrust gate from below. The invention can be used in industrial processes, such as for cooling cement clinkers or for refuse incineration (5/1-4). The apparently mis-cited Stahl patent describes an alternative version of a thrust grate cooler use to, for example, cool cement clinkers emerging from a rotary kiln (1/9-11).

The Cited Art Distinguished

**Independent claim 1** has been rejected as anticipated by Shingleton. Shingleton shows a tracking solar collector arrangement including rows of tracking solar assemblies. The examiner has apparently taken the position that some of the tracking solar assemblies could be considered shade structures. The rejection in the phrase spanning pages 3 and 4 states "a shade structure (this enhanced shading is provided by the panels) positioned at a selected location between selected ones of the torque tubes..." There is nothing in the rejection stating that the Shingleton patent discloses or suggest the use of a stationary shade structure positioned at a fixed location. There is nothing in Shingleton or the other cited art disclosing or suggesting any such shade structure. There would have been no reason to modify Shingleton because the art lacks any reason to provide a shaded region, must less an enhanced shaded region, in conjunction with rows of panels. According, claim 1 is allowable over the cited art.

**Independent claim 33 is allowable for the same reasons as is claim 1.**

The **dependent claims** are directed to specific novel subfeatures of the invention and are allowable for that reason as well as by depending from novel parent claims.

- For example, **claim 13** has been rejected in part over Catella. While applicant believes that the rib stiffeners 36 and rectangular structure 37 of Catella do not constitute a protective panel, claim 13 was previously amended to more specifically recite what one of ordinary skill in the art would understand as characteristics of a protective panel, that is something covering the lower surface to protect it from damage. There would have been no reason to modify the cited art to arrive at the invention of claim 13 because there was no recognition of the desirability or need to do so. **In addition**, claim 13 has been amended to specify the protective panel is spaced apart from substantially the entire lower surface of the PV module. In contrast, flexible PV module 22 necessarily contacts the support member because of its lack of rigidity. Assuming, for sake of discussion, that the support structure of Catella constitutes a protective panel, which it does not, it would not have been obvious to modify the support structure of Catella so that it is spaced apart from the entire lower surface of flexible PV module 22 because doing so would eliminate the necessary

- structural support for flexible PV module 22. Accordingly, claim 13 is further allowable over the art.
- As to **claim 36**, the Morton patent shows a portable garage having solar panels on its roof to allow the doors to be opened and closed with the electricity generated by the solar panels. Applicant believes that it would not have been obvious to combine the rows of tracking solar collector assemblies of Shingleton with the portable garage of Morton.
  - "The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting any rejection under 35 U.S.C. 103 should be made explicit. The court quoting *In re Kahn* [footnote omitted] stated that "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reason with some rationale underpinning to support the legal conclusion of obviousness." Federal Register, Vol. 72, No. 195, Wednesday, October 10, 2007 at 57528-57529. In this case the Examiner has combined the two references under the apparent assumption that they could be combined without providing a rationale (7 types being outlined in the Federal Register Notice) supporting the conclusion of obviousness.
- Even if one were to assume, for sake of discussion, that it would have been obvious to combine the teachings of Shingleton and Morton, the resulting structure would not bear much resemblance to the invention of claim 36. That is, the resulting structure would not be a support structure comprising first and second mounting assemblies with the second mounting assembly supporting the shade structure as claimed. The examiner has provided no guidance as to how or why one of ordinary skill in the art would have been led to combine these references in a manner to arrive at the present invention. Accordingly, claim 36 is allowable over the cited art.
- Dependent **claim 37** now recites first, second, third, fourth and fifth rows of panels and first and second stationary shade structures between the first and second rows and between the fourth and fifth rows of panels. The Examiner has cited Klintworth as

- disclosing a movable roof tile. However, **Klintworth is not analogous art**. It is not in the field of the applicant's endeavor (solar energy generation) nor is it reasonably related to the particular problem with which applicant was involved (providing a shaded vehicular parking area in conjunction with rows of spaced apart panels). As discussed above with regard to the Klintworth citation, Klintworth has nothing to do with roofing but merely states that the grates overlap one another "in the manner of a roof tile". The Examiner has provided no rational underpinning to support the legal conclusion of obviousness. According, claim 37 is allowable over the cited art.
- Dependent claim 38 is allowable as depending from allowable claim 37 as well as reciting the advantageous feature of the rows and shade structures having generally equal lengths to maximize the shading between the rows. In addition, the cited case is not applicable because, as discussed above, the relative dimensions are not the only distinction between the cited art and the claimed invention. Accordingly, claim 38 is also allowable over the cited art.

In light of the above remarks and the amendments to the claims, applicant submits that the application is in condition for allowance and action to that end is urged. If the Examiner believes a telephone conference would aid the prosecution of this case in any way, please call the undersigned at (650) 712-0340.

Respectfully submitted,

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